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(54) Title: NITRIC OXIDE RELEASING PYRUVATE COMPOUNDS, COMPOSITIONS AND METHODS OF USE

(57) Abstract: The invention describes novel pyruvate compounds comprising at least one nitric oxide releasing group and pharmaceutically acceptable salts thereof, and novel compositions comprising at least one pyruvate compound comprising at least one nitric oxide releasing group, and, optionally, at least one nitric oxide donor and/or at least one therapeutic agent. The invention also provides novel compositions comprising at least one pyruvate compound and at least one nitric oxide donor compound and/or at least one therapeutic agent. The invention also provides novel kits comprising at least one pyruvate compound, that is optionally substituted with at least one nitric oxide releasing group, and, optionally, at least one nitric oxide donor and/or at least one therapeutic agent. The invention also provides methods for (a) treating cardiovascular diseases; (b) treating renovascular diseases; (c) treating diabetes; (d) treating diseases resulting from oxidative stress; (e) treating endothelial dysfunctions; (f) treating diseases caused by endothelial dysfunctions; (g) treating cirrhosis; (h) treating pre-eclampsia; (j) treating osteoporosis; (k) treating nephropathy; (l) reperfusing injury following ischemia; and/or (m) preserving tissues, organs, organ parts and/or limbs. The nitric oxide releasing group is preferably a nitro group (i.e. NO₂), a nitroso group (i.e. NO) and/or a heterocyclic nitric oxide donor group. The heterocyclic nitric oxide donor group is preferably a furoxan, a sydnonimine, an oxatriazole-5-one and/or an oxatriazole-5-imine.



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